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(54) **SUSPENSION DEVICE**

AUFHÄNGUNGSVORRICHTUNG

DISPOSITIF DE SUSPENSION

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EP 2 244 611 B1

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Description

Field of the invention

[0001] The invention relates to a suspension device with which signs, posters and other information carriers, for example, can be hung up in a shop or the like. The invention especially relates to a device of this kind according to the preamble to Patent Claim 1.

Background to the invention

[0002] In general stores, for example, it is often desirable to present messages on information carriers in the form of signs, posters, advertising strips or the like. Such information carriers can be constituted by sheets of paper, plastic or other materials on which a written or otherwise represented message is printed or otherwise applied. For example, it may be desirable to hang up in aisles between shelves, next to the shelves, oblong posters arranged at right angles to the longitudinal direction of aisle and shelves. Such posters are clearly visible to customers passing along the aisles and can be used to provide clear information on the types of goods present on the different sections of the shelves.

[0003] The information carriers are often hung up with the aid of special suspension devices, which can be fixed to the shelf, the shelf rack or other parts of the shelf. It may also be desirable, of course, to hang up signs, posters, advertising strips or three-dimensional information carriers, such as product models and advertising figures, at other locations within the shop.

Prior art

[0004] According to the prior art, such suspension devices can comprise a fixing part, with which the suspension device can be fixed at a suitable place within the shop. The device also comprises an arm, which projects from the fixing part and supports suspension members to which the information carrier can be fastened such that it hangs down from the arm. The suspension members can be constituted, for example, by hooks, which are threaded into corresponding holes through the information carrier.

[0005] JP 8 272304 A discloses such a known suspension device, comprising two suspension members which are formed as hooks fixed in radial holes through the arm or as pinching members which are threaded onto the arm. This known suspension device exhibits the features set out in the preamble of claim 1 below.

[0006] In a previously known suspension device, the arm is constituted by a tube having a longitudinal slit. The suspension members comprise a hook, which is connected by means of a web portion to a slide-in portion. During assembly, the slide-in portion is slid axially into the tube of the arm, so that the web portion extends out through the tube slit and the hook is placed outside the tube. By

configuring the slide-in portion with friction fit in the tube, it is possible to obtain an adequate fixing of the hook in the axial direction, so that the hook and the poster do not slide back and forth along the arm. One problem with this construction is, however, that the arm must always be mounted such that the slit is facing downwards. Should the arm enclose an angle, this means that different suspension devices must be used if these are to be fastened to the top or bottom side of a shelf. Another problem with this construction is that the hooks are rigidly fastened to the arm. Usually, two or more hooks are used, which are disposed on an arm for hanging up a sign. In the case of rigidly secured hooks, a tilting effect, similar to the drawer effect, often then arises between the hooks. If a poster hung up in this way is knocked such that it swings up around the points of contact with the hooks, the poster, due to this effect, is in danger of not returning to a vertical position, but instead remaining obliquely hanging from the suspension device.

[0007] In another known suspension device, one or more hooks is/are fixed so as to project radially from a tube sleeve threaded onto the tube of the arm. If the tube sleeve is configured with a tight friction fit around the tube of the arm, an adequate fixing in the axial direction can be obtained. The friction fit brings the drawback, however, that the hook or hooks remain tilted if they or the poster are knocked. If the tube sleeve is instead configured with a slide fitting around the tube of the arm, the hook or hooks can pivot freely about the arm, so that, after having been knocked, they return to the vertical position through the influence of gravity. In such a slide fitting, the problem arises, however, that an adequate fixing in the axial direction cannot be achieved. In this latter construction, the arm must be provided with an end stop, moreover, to prevent the tube sleeve from sliding off the arm.

[0008] In another known device, the suspension members comprise hooks which are fastened to C-shaped slitted sleeves which can be snapped in place around the arm. In these devices, too, the above-described problems arise, since the sleeves are configured with a tight friction fit or loose slide fit around the arm.

[0009] In order to reduce the above-described problems, it has been proposed to configure the suspension members as hooks which are radially disposed on annular sleeves threaded axially onto the arm. The sleeves are configured with a slide fit, so that the hooks can pivot freely about the arm. In order to achieve axial fixing, two circular locking sleeves are also threaded onto the arm with friction fit, one on each side of the sleeve of the hook. This solution is also beset with problems, however, and has not enjoyed any market success. Firstly, this suspension device entails a large number of separate constituent parts, which must be produced, stocked and distributed and which must be kept track of by the assembly personnel. In addition, the assembly work is relatively awkward, since it requires a relatively large number of loose parts to be threaded axially onto the arm of the suspension device and in the right order.

Summary of the invention

[0010] One object of the invention is therefore to provide an improved suspension device of the kind specified in the introduction. Another object is to provide a suspension device of this kind, which allows great flexibility as regards choice of siting of the device. A further object is to provide such a device which, with simple means, ensures that an information carrier hung up with the device remains in or returns to a vertical suspension position. Yet another object is to provide such a device which, with simple means, ensures that the information carrier is not displaced in the axial direction. Again another object is to provide such a device which is simple and which comprises a small number of constituent parts which are relatively cheap to produce. One more object is to provide such a device which is simple to fit.

[0011] These and other objects are realized with a device of the kind which is specified in the preamble to Patent Claim 1 and which has the special technical features specified in the characterizing part of the claim. The device is intended for the suspension of information carriers, such as signs, posters and the like. The device comprises a fixing part, which is configured to allow the device to be fixed to a shelf or the like, an arm projecting from the fixing part and having an arm portion, the cross-sectional periphery of which essentially forms a circle or a segment of a circle, and a suspension member, which is disposed on the arm portion. The device also comprises a fixing member, which is fixable to the arm portion and comprises a friction surface which, by frictional engagement with the arm portion, prevents axial displacement of the fixing member along the arm portion, and two butt faces. The suspension member comprises two stop faces, each of which is arranged to limit, in contact with one respectively of the butt faces of the fixing member, axial displacement of the suspension member along the arm portion, as well as a sliding surface, which in contact with the fixing member or the arm portion allows rotation of the suspension member about the arm portion.

[0012] The invention is based on the insight that it is possible to achieve both free rotatability of the suspension member about the arm and axial fixing of the suspension member by means of two interacting parts disposed on the arm. These parts are constituted by the suspension member itself and by a fixing part. The free rotatability is achieved by means of a sliding surface, which is disposed on the suspension member and which allows this member to rotate freely about the arm. The axial fixing is achieved in a simple manner with at least one friction surface, which is disposed on the fixing member and is in contact with the arm, and two pairs of interacting contact surfaces, which are disposed on the suspension member and fixing member respectively. The butt faces disposed on the fixing member can be facing towards or away from each other, the stop faces disposed on the suspension member being directed away from or towards each other, respectively.

[0013] With the device according to the invention, a simple suspension device is thereby obtained, which at the same time allows hooks or other suspension members to rotate freely and prevents these members from being undesirably displaced axially along the arm. The suspension device is also simple and comprises a small number of parts, which can be produced relatively cheaply. The invention further allows the suspension device to be fitted very easily and quickly. Moreover, the device can be quickly and easily supplemented or reconfigured by simple fitting of additional suspension members, and removal or exchange of existing suspension members.

[0014] The device expediently comprises a first and second pair of interacting fixing members and suspension members. In a simple manner, this allows the information carrier to hang straight in relation to both a vertical and a horizontal axis.

[0015] The sliding surface of the suspension member is expediently cylindrical and at least one of the butt faces of the fixing member is expediently disposed on an elastic arm. This allows simple fitting of a suspension member which fully encloses the arm portion. By virtue of the elastic arm, the fixing member can first be fastened to the arm portion and, after this, the suspension member can be threaded axially around the arm portion and, through snap-locking action with the elastic arm, threaded over this into a correct position between the two butt faces of the fixing member. If the two butt faces of the fixing member are each disposed on their respective elastic arm, the enclosing suspension member can be snapped into correct position between the butt faces from both axial directions of the arm portion.

[0016] Instead of being provided with a cylindrical sliding surface which fully encloses the arm portion, the suspension member can comprise a radially open sleeve portion having a radially inward facing, generally C-shaped sliding surface. The suspension member can then be easily snapped in place between the butt faces on an already fixed fixing member.

[0017] The arm portion can comprise a tube having a longitudinal slit and the fixing member can comprise two oppositely directed friction surfaces arranged for frictional engagement with the walls of the slit or the inner wall of the tube. The fixing member can hence be easily fixed to the arm portion by being guided in the radial direction into engagement with the slit in correct position on the arm portion. In this way, assembly is facilitated in that the fixing member does not need to be threaded axially onto the arm portion.

[0018] The fixing member can alternatively comprise a radially elastic sleeve having a radially inward facing friction surface arranged for frictional engagement with the shell surface of the arm portion. The fixing member can then be fixed to an arm portion, regardless of whether this is provided with a through slit or not. The sleeve of the fixing member can in this case have a C-shaped cross section. The radial elasticity of the sleeve is thereby achieved in a simple manner. If the distance between the

ends of the C-shaped cross section is made sufficiently large, the fixing member can be fastened to the arm portion by being snapped in place around this in the radial direction.

[0019] The sleeve of the fixing member can alternatively be constituted by a generally zigzag-shaped ring. The radial elasticity of the sleeve is hereby achieved by bending action between the zigzag-shaped portions of the ring. Such a sleeve is fitted to the arm portion by being threaded onto this in the axial direction.

[0020] The suspension member expediently comprises a hook or a clamping device for securement of a sheet-shaped information carrier. The information carrier can hence be easily hung up on the suspension device.

Brief description of the figures

[0021] Illustrative embodiments of the invention will be described below with reference to the figures, whereof:

Figs. 1a-c are schematic perspective views of a suspension device according to one embodiment of the invention and show how the device can be fastened to a shelf or the like in different ways. Fig. 1d is a plan view from the front of the device shown in Fig. 1c.

Fig. 2 is a perspective view of a second embodiment of the device, which is fixed to an upright in a shelf rack.

Figs. 3a-c are perspective views of parts forming part of a suspension device according to a preferred embodiment. Fig. 3d is a partially transparent plan view which shows these parts.

Fig. 4a is a perspective view of certain parts forming part of another embodiment. Fig. 4b is an end view of one of these parts and Fig. 4c is a perspective view of another of these parts.

Fig. 5a is a perspective view of certain parts forming part of one further embodiment. Fig. 5b is a perspective view of one of these parts and Fig. 5c is a perspective view of another of these parts.

Fig. 6a is a perspective view of certain parts forming part of yet another embodiment. Fig. 6b is a perspective view of one of these parts and Fig. 6c is a perspective view of another of these parts.

Fig. 7 is a perspective view of an embodiment of the device according to the invention, which embodiment forms part of yet another.

Detailed description of embodiments

[0022] In Figs. 1a-d it is shown how a suspension de-

vice according to the invention can be fixed in different way in, for example, a shop. The suspension device shown in Figs. 1a-d comprises a fixing part 10, an arm 20 and two suspension members 30, which latter comprise hooks and are arranged around a rectilinear arm portion 21 of the arm 20. The fixing part 10 comprises a magnet (not shown) for magnetic fastening to a shelf 1 of, for example, steel. The arm 20 is attached to the fixing part 10 by means of a hinge 11. Fig. 1a shows how the fixing part 10 has been attached to the bottom side of the shelf 1 and Fig. 1b shows how it has been attached to the top side of the shelf 1. Figs. 1c and 1d shown how the fixing part 10 has been attached to a vertical face of a shop fittings part (not shown).

[0023] Fig. 2 shows another suspension device, which is fixed to a perforated upright 2. This suspension device differs from that in Figs. 1a-d primarily by the fact that the fixing part 10 is configured to engage with the holes in the upright and that the arm 20' comprises two joined-together parts, one of which comprises a rectilinear arm portion 21 on which two suspension members 30 are disposed.

[0024] In both these embodiments, an information carrier (not shown), such as a sheet-shaped poster, is hung up on the suspension members by the hooks being threaded into through holes made in the information carrier.

[0025] It will be appreciated that it means a considerable advantage if the suspension members 30 are able to rotate freely about the arm portion 21. This ensures that the information carrier hangs in a vertical plane, regardless of how the fixing part is fixed to a shelf or the like. One and the same suspension device can thus be utilized, regardless of whether it will be attached, for example, to the bottom or top side of a shelf or whether the fixing part is obliquely attached to a vertical surface, as is illustrated in Figs. 1c-d. It will further be appreciated that the suspension members should be axially fixed, or at least should be less than fully axially movable along the arm portion, to prevent the information carrier from being displaced along or sliding off the arm 20.

[0026] The ways in which these and other advantages can be achieved according to different embodiments of the invention are described below with reference to Figs. 3a-7.

[0027] In the embodiment shown in Figs. 3a-c, the arm of the suspension device comprises a rectilinear arm portion 22, a fixing member 40 and a suspension member 50.

[0028] The arm portion is formed by a tube, in which a longitudinal slit 23 is made. The arm portion 22 has a cross section, the periphery of which forms a segment of a circle. The slit 23 is delimited in the lateral direction by two walls 24 and the tube has an inner wall 25.

[0029] On this arm portion 22, the fixing member 40 is disposed. The fixing member 40 comprises a base portion 41, on which two raised elastic arms 42 are disposed. Each arm 42 has on its free end a butt face 43. In the embodiment shown in Figs. 3a-c, these butt faces 43 are

facing towards each other. Two friction legs 44 are further connected to the base portion 41, between the arms 42, and extend from the base portion 41 upwards, obliquely outwards away from each other. The two friction legs 44, on their sides facing away from each other, each have a respective friction surface 45.

[0030] The fixing part 40 is fastened to the arm portion 22 by being guided towards and into the latter in the radial direction. The base portion 41 passes in between the walls 24 of the slit 23 and is received inside the tube. The bottom of the base portion 41 rests against the inner wall 25 of the tube and the two friction surfaces 45 are brought into frictional engagement with the walls 24 of the slit. This generates a friction between the fixing member 40 and the arm portion 22, which friction is sufficiently large to prevent the fixing member 40 from being accidentally displaced along the arm portion 22. When the fixing member 40 is fixed to the arm portion 22, the arms 42 and the butt faces 43 jut out through the slit, a little bit beyond the outer peripheral surface of the tube.

[0031] The suspension member 50 comprises a hook 51, which is connected to a cylindrical sleeve 52. The cylindrical sleeve has an inner cylindrical sliding surface 53. The diameter of the sliding surface 53 is somewhat larger than the outer diameter of the arm portion 22, but smaller than the distance from the outermost point on the butt faces 43 to a diametrically opposite point on the outer shell surface of the arm portion 22. On the cylindrical sleeve 52 there are further disposed two stop faces 54, which are facing away from each other. The stop faces 54 are substantially parallel and constitute end limit surfaces of the cylindrical sleeve 52.

[0032] The suspension member 50 is fastened to the arm portion 22 by means of the fixing member 40 by first being threaded axially onto the arm portion 22. When the cylindrical sleeve 52 comes into contact with one elastic arm 42 of the fixing member 40, this is pressed inwards, whereupon the cylindrical sliding surface 53 of the sleeve can pass the elastic arm. Once the sleeve 52 has passed the arm 42 and is located between the two arms 42, the previously pressed-in arm snaps back into its original pushed-out position. The two butt faces 43 will here radially overlap the stop faces 54 on the sleeve 52. The axial movement of the sleeve 52 is thus limited to the section defined by the distance between the two butt faces 43, minus the distance between the stop faces 54. In the shown example, the length of the sleeve 52 is substantially equal in size to the distance between the two butt faces 43, the mobility of the sleeve in the axial direction being very small. To allow the suspension member 50 to rotate freely about the arm portion 22, it is important, however, to avoid friction between the butt faces 43 and the stop faces 54. The distance between the stop faces 54 should therefore be at least somewhat less than the distance between the butt faces 43. Should it be desirable to allow a certain axial displacement of the suspension member, for example to make it easier for a poster provided with two or more holes to be fitted on respective

hooks on a corresponding number of suspension members, the distance between the butt faces can be made larger, by a corresponding degree, than the distance between the stop faces.

[0033] Once the sleeve 54 of the suspension member has assumed its position between the butt faces 43 on the fixing member, the cylindrical sliding surface allows the suspension member to rotate freely about the arm portion, at the same time as the interacting stop and stop faces limit the axial movement of the suspension member.

[0034] In the embodiment shown in Figs. 4a-c, the fixing member 40' is instead constituted by a component which, in the mounted state, is disposed partially outside the arm portion 22. The fixing member comprises two friction surfaces 43' facing away from each other, which, in the mounted state, make frictional engagement with the walls 24 of the slit 23. The two friction surfaces are disposed on a bridge 46'. The fixing member further has two mutually facing butt faces 43', which are disposed beyond the outer shell surface of the arm portion 22. This fixing member, too, can be fastened to the arm portion by being guided in radially, so that the friction surfaces 45' enter into engagement with the walls 24 of the slit. When the fixing member 40' is fixed to the arm portion 22, the outer surface of the bridge 46' is disposed between the walls of the slit 23, i.e. at a level radially inside the outer shell surface of the arm portion 22.

[0035] In this embodiment, the suspension member 50' comprises a somewhat differently configured hook 51', which is connected to a radially open sleeve 52' of generally C-shaped cross section. The sleeve 52' has a radially inward facing sliding surface 53' and two stop faces 54', facing away from each other, which constitute the end faces of the sleeve 50'. In this embodiment, the suspension member 50' can be attached to the arm portion 22 in the radial direction. The radial opening in the sleeve 50' is then widened, so that the arm portion 22 can pass in between the ends of the C-shaped cross section of the sleeve. In this way, the sleeve 50' is snapped in place around the arm portion 22, between the two butt faces 43' of the fixing member 40'. Alternatively, the fixing member 40' can first be guided into the sleeve 52' of the suspension member. After this, the sleeve 52 of the suspension member and the fixing member 40' are threaded jointly onto the arm portion 22 in the axial direction.

[0036] In the embodiment shown in Figs. 5a-c, the fixing member comprises a radially open elastic sleeve 40". The sleeve 40" has two mutually facing, radially projecting butt faces 43", a radially inward facing friction surface 45" and a radially outward facing sliding surface 47". This friction member 40" can be fastened to the arm portion 22 either by being snapped in place radially around the arm portion 22, or by being threaded on axially.

[0037] The suspension member 50" according to the embodiment shown in Figs. 5a-c comprises a hook 51", which is connected to a radially open sleeve 52". The

sleeve 52" has on its end faces two stop faces 54" , facing away from each other, and a radially inward facing sliding surface 53" . The diameter of the sliding surface 53" of the suspension member is somewhat larger than the outer diameter of the radially outward facing sliding surface 47" of the fixing member 40". The suspension member 50" can either be snapped in place radially around the sleeve 40" of the fixing member, when this is mounted on the arm portion 22, or is threaded together with the sleeve 40" axially onto the arm portion. In this embodiment, the axial movement of the suspension member is limited, as in the above-described embodiments, by locking contact between the butt faces 43" and the stop faces 54". The free rotation of the suspension member 50" about the arm portion 22 is in this embodiment allowed by the low friction between the sliding surface 53" of the suspension member and the sliding surface 47" of the fixing member. The difference in diameter of these two sliding surfaces here helps to reduce this friction.

[0038] In the embodiment shown in Figs. 6a-c, the fixing member is constituted by a zigzag-shaped ring 40". The axial end faces of the ring 40" each form a respective set of butt faces facing away from each other. The ring further has a radially inward facing friction surface 45". The zigzag shape of the ring helps to make the ring radially elastic, so that it can be threaded axially onto the arm portion 22 and so that the friction surface 45", in the mounted state, nevertheless achieves a sufficiently strong frictional engagement with the shell surface of the arm portion 22, so that accidental axial displacement of the fixing member 40" is prevented.

[0039] The suspension member 50" comprises a hook 51", which is connected to a radially open sleeve 52" which is split in the axial direction. The split sleeve has two radially inward facing sliding surfaces 53" and two mutually facing stop faces 54". The diameter of the sliding surfaces 53" is somewhat larger than the diameter of the outer shell surface of the arm portion 22. The split sleeve 50" can be fastened to the arm portion either by being snapped radially in place, or by being threaded, together with the ring 40" of the fixing member, axially onto the arm portion 22. In the mounted state, free rotation of the suspension member is allowed by the low friction between the sliding surfaces 53" and the outer shell surface of the arm portion. The limitation of the axial movement of the suspension member is achieved by locking contact between the two sets of butt faces 43" and the stop faces 54" .

[0040] Fig. 7 shows an alternative embodiment of the suspension member, which can be used together with, for example, the fixing member 40" shown in Figs. 6a and 6c. This suspension member 50" differs from that in Figs. 6a-b by the fact that the split sleeve 52" is not radially open, but circular. This sleeve thus has two radially inward facing cylindrical sliding surfaces 53" . In this embodiment, assembly is carried out by first placing the fixing member in between the stop faces 54" and then axially threading these two members jointly into the

desired position on the arm portion.

[0041] The invention is not limited to the embodiments described above, but can be freely varied within the scope of the following patent claims. Even though only one pair of interacting fixing members and suspension members has been shown and described for each embodiment of the suspension device, it will be appreciated that the suspension devices are expediently provided with two or more such pairs of interacting members. It will also be appreciated that the fixing part, apart from being configured for magnetic securement or for engagement in holes, can also be configured in a number of different ways to allow the suspension device to be fixed to any fixed or movable element in, for example, a shop. The fixing part can comprise, for example, fastening means using double-sided adhesive tape, rivets, screws, glue, suction cups, or the like. Apart from achieving frictional engagement in contact with slit walls or an outer shell surface of the arm portion, the friction surface or friction surfaces of the fixing member can instead or additionally interact with the inner wall of the arm portion. It will further be appreciated that parts, members and components from the shown and above-described embodiments can be mutually combined.

Claims

1. Device for the suspension of information carriers, such as signs, posters and the like, which device comprises
 - a fixing part (10, 10'), which is configured to allow the device to be fixed to a shelf or the like,
 - an arm (20, 20') projecting from the fixing part and having an arm portion (21, 22), the cross-sectional periphery of which essentially forms a circle or a segment of a circle, and
 - a suspension member (30, 50-50''), which is disposed on the arm portion, **characterized by**
 - a fixing member (40-40''), which is fixable to the arm portion and comprises a friction surface (45-45'') which, by frictional engagement with the arm portion, prevents axial displacement of the fixing member along the arm portion, and two butt faces (43-43''), and in that
 - the suspension member comprises two stop faces (54-54''), each of which is arranged to limit, in contact with one respectively of the butt faces of the fixing member, axial displacement of the suspension member along the arm portion, as well as a sliding surface (53-53''), which in contact with the fixing member or the arm portion allows rotation of the suspension member about the arm portion.
2. Device according to Claim 1, comprising a first and second pair of interacting fixing members and sus-

pension members.

3. Device according to Claim 1 or 2, in which the sliding surface (53, 53'') of the suspension member is cylindrical and at least one of the butt faces (43) of the fixing member is disposed on an elastic arm (42). 5
4. Device according to Claim 1 or 2, in which the suspension member comprises a radially open sleeve portion (52'-52'') having a radially inward facing, generally C-shaped sliding surface (53'-53''). 10
5. Device according to any one of Claims 1-4, in which the arm portion (22) comprises a tube having a longitudinal slit (23) and the fixing member comprises two friction surfaces (45, 45') arranged for frictional engagement with the walls (23) of the slit or the inner wall (25) of the tube. 15
6. Device according to any one of Claims 1-4, in which the fixing member comprises a radially elastic sleeve (40'', 40''') having a radially inward facing friction surface (45'', 45''') which is arranged for frictional engagement with the shell surface of the arm portion (22). 20
7. Device according to Claim 6, in which the sleeve (40'') of the fixing member has a C-shaped cross section. 25
8. Device according to Claim 6, in which the sleeve (40'') of the fixing member is constituted by a generally zigzag-shaped ring. 30
9. Device according to any one of Claims 1-8, in which the suspension member comprises a hook (51-51'') or a clamping device for securement of a sheet-shaped information carrier. 35

Patentansprüche

1. Vorrichtung zum Aufhängen von Informationsträgern, wie Schildern, Plakaten und dergleichen, wobei die Vorrichtung Folgendes umfasst: 40
 - einen Fixierungsteil (10,10'), der eingerichtet ist, der Vorrichtung zu ermöglichen, an ein Regal oder Ähnliches fixiert zu werden,
 - einen Arm (20, 20'), der aus dem Fixierungsteil herausragt und einen Armabschnitt (21, 22) aufweist, dessen Querschnittsumfang im Wesentlichen einen Kreis oder ein Segment eines Kreises bildet, und
 - ein Aufhängungsglied (30, 50-50''), das auf dem Armabschnitt angeordnet ist, **gekennzeichnet durch**
 - ein Fixierungsglied (40-40''), das an dem Arm-

abschnitt fixiert werden kann und eine Reibungsfläche (45-45'') aufweist, die **durch** Reibungseingriff mit dem Armabschnitt eine axiale Verschiebung des Fixierungsglieds entlang des Armabschnitts verhindert, und zwei Endflächen (43-43''), und **dadurch**, dass

- das Aufhängungsglied zwei Arretierungsflächen (54-54''), wobei jede angepasst ist, in Kontakt mit einer jeweiligen der Endflächen des Fixierungsglieds, eine axiale Verschiebung des Aufhängungsglieds entlang des Armabschnitts zu begrenzen, sowie eine Gleitfläche (53-53'') aufweist, die, in Kontakt mit dem Fixierungsglied oder dem Armabschnitt, eine Rotation des Aufhängungsglieds um den Armabschnitt ermöglicht.

2. Vorrichtung nach Anspruch 1, umfassend ein erstes und zweites Paar von zusammenwirkenden Fixierungsgliedern und Aufhängungsgliedern.
3. Vorrichtung nach Anspruch 1 oder 2, bei welcher die Gleitfläche (53, 53'') des Aufhängungsglieds zylindrisch ist und mindestens eine der Endflächen (43) des Fixierungsglieds auf einem elastischen Arm (42) angeordnet ist.
4. Vorrichtung nach Anspruch 1 oder 2, bei welcher das Aufhängungsglied einen radial offenen Hülzenabschnitt (52'-52'') mit einer radial nach innen gerichteten, allgemein C-förmigen Gleitfläche (53'-53'') aufweist.
5. Vorrichtung nach einem der Ansprüche 1 bis 4, bei welcher der Armabschnitt (22) ein Rohr mit einem longitudinalen Schlitz (23) aufweist und das Fixierungsglied zwei Reibungsflächen (45, 45') aufweist, die zum Reibungseingriff mit den Wandungen (23) des Schlitzes oder der inneren Wandung (25) des Rohres angepasst sind. 40
6. Vorrichtung nach einem der Ansprüche 1 bis 4, bei welcher das Fixierungsglied eine radial elastische Hülse (40'', 40''') mit einer radial nach innen gerichteten Reibungsfläche (45'', 45''') aufweist, die zum Reibungseingriff mit der Mantelfläche des Armabschnitts (22) angepasst ist. 45
7. Vorrichtung nach Anspruch 6, bei welcher die Hülse (40'') des Fixierungsglieds einen C-förmigen Querschnitt aufweist. 50
8. Vorrichtung nach Anspruch 6, bei welcher die Hülse (40'') des Fixierungsglieds durch einen allgemein zickzack-förmigen Ring gebildet ist. 55
9. Vorrichtung nach einem der Ansprüche 1 bis 8, bei welcher das Aufhängungsglied einen Haken

(51-51''') oder eine Klemmvorrichtung zur Sicherung eines blattförmigen Informationsträgers aufweist.

Revendications

1. Dispositif de suspension de supports d'informations, tels que des panneaux, affiches, et autres, lequel dispositif comprend :

- une partie de fixation (10, 10'), qui est configurée pour permettre au dispositif d'être fixé à une étagère ou similaire,
- un bras (20, 20') en projection de la partie de fixation et ayant une portion de bras (21, 22), dont la périphérie de section transversale forme essentiellement un cercle ou un segment d'un cercle, et
- un membre de suspension (30, 50-50'''), qui est disposé sur la portion de bras, **caractérisé par**
- un membre de fixation (40-40'''), qui peut être fixé à la portion de bras et comprend une surface de friction (45-45'''), qui empêche, par enclenchement frictionnel avec la portion de bras, un déplacement axial du membre de fixation le long de la portion de bras, et deux surfaces d'extrémité (43-43'''), et en ce que
- le membre de suspension comprend deux surfaces d'arrêt (54-54'''), chacune étant configurée pour limiter, en contact avec l'une des surfaces d'extrémité du membre de fixation, respectivement, un déplacement axial du membre de suspension le long de la portion de bras, ainsi qu'une surface de glissement (53-53'''), laquelle, en contact avec le membre de fixation ou la portion de bras, permet une rotation du membre de suspension autour de la portion de bras.

2. Dispositif selon la revendication 1, comprenant une première et une seconde paire de membres de fixation et de membres de suspension en interaction.
3. Dispositif selon la revendication 1 ou 2, dans lequel la surface de glissement (53, 53''') du membre de suspension est cylindrique et au moins une des surfaces d'extrémité (43) du membre de fixation est disposée sur un bras élastique (42).
4. Dispositif selon la revendication 1 ou 2, dans lequel le membre de suspension comprend une portion ouverte radialement formant un manchon (52'-52''') ayant une surface de glissement (53'-53''') orientée radialement vers l'intérieur et d'une forme générale en C.
5. Dispositif selon l'une quelconque des revendications 1 à 4, dans lequel la portion de bras (22) comprend

un tube ayant une fente longitudinale (23) et le membre de fixation comprend deux surfaces de friction (45, 45') configurées pour un enclenchement frictionnel avec les parois (23) de la fente ou la paroi intérieure (25) du tube.

6. Dispositif selon l'une quelconque des revendications 1 à 4, dans lequel le membre de fixation comprend un manchon radialement élastique (40'', 40''') ayant une surface de friction (45'', 45''') orientée radialement vers l'intérieur, qui est configuré pour un enclenchement frictionnel avec la surface de coque de la portion de bras (22).

7. Dispositif selon la revendication 6, dans lequel le manchon (40'') du membre de fixation a une section transversale en forme de C.

8. Dispositif selon la revendication 6, dans lequel le manchon (40'') du membre de fixation est constitué par une bague de forme générale en zigzag.

9. Dispositif selon l'une quelconque des revendications 1 à 8, dans lequel le membre de suspension comprend un crochet (51-51''') ou un dispositif de blocage pour une sécurisation d'un support d'informations en forme de feuille.

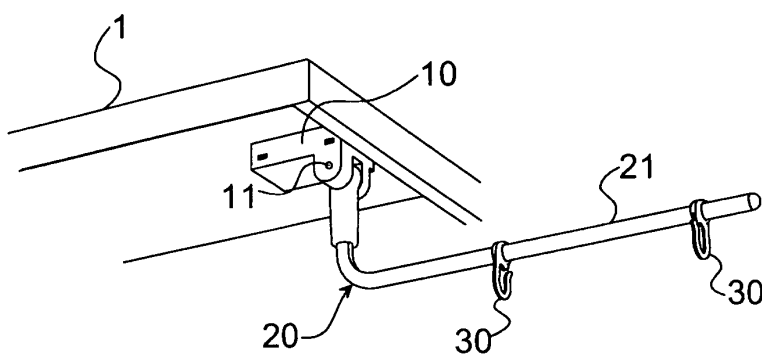


Fig. 1a

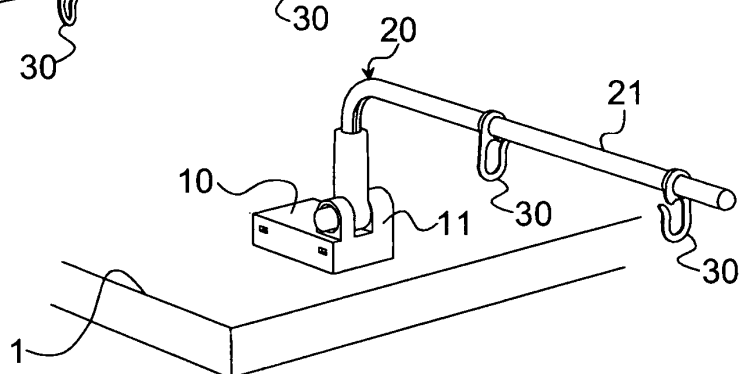


Fig. 1b

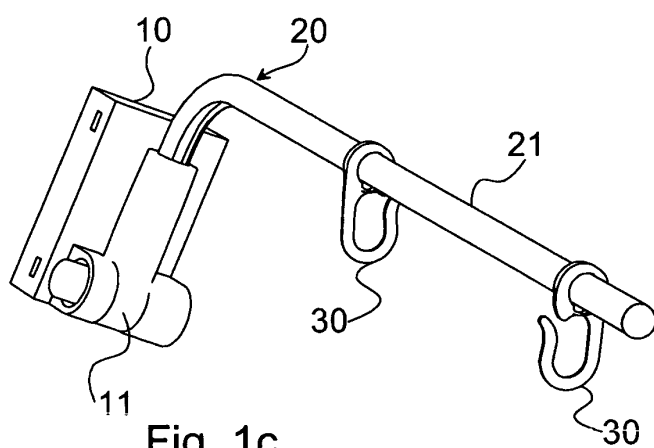


Fig. 1c

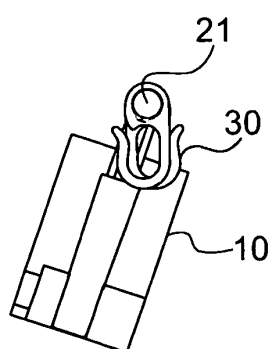


Fig. 1d

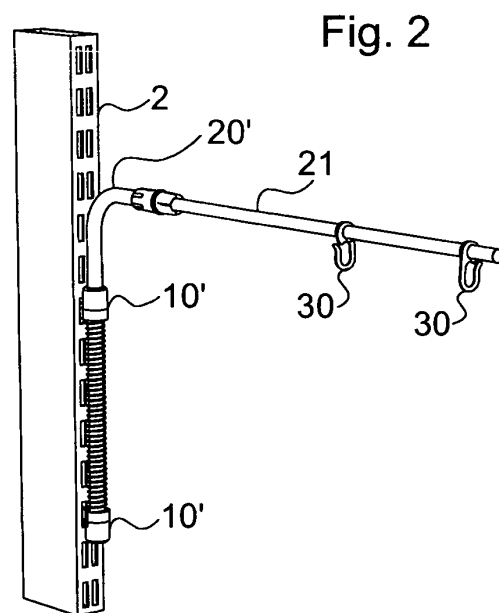


Fig. 2

Fig. 3a

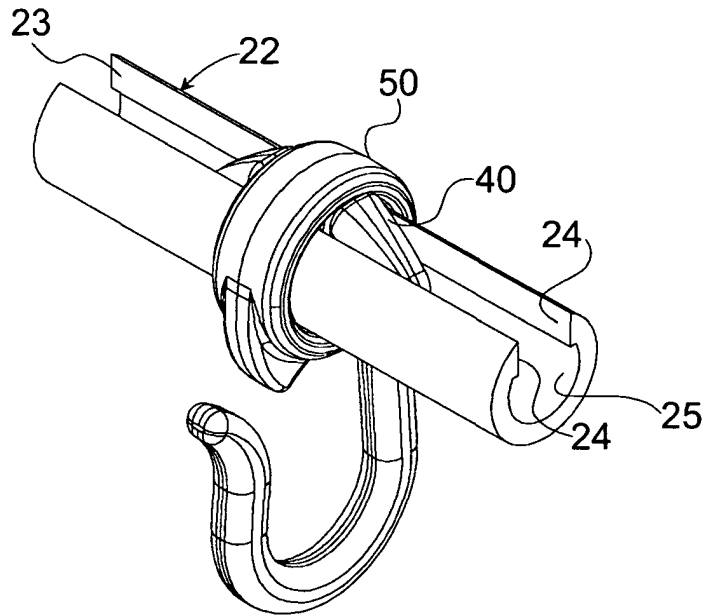


Fig. 3d

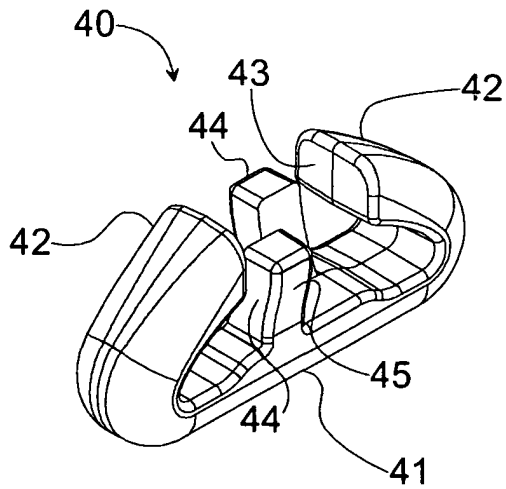
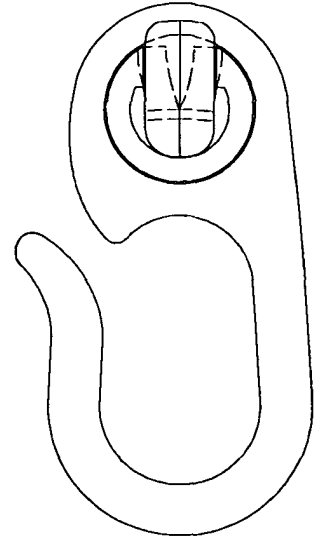


Fig. 3b

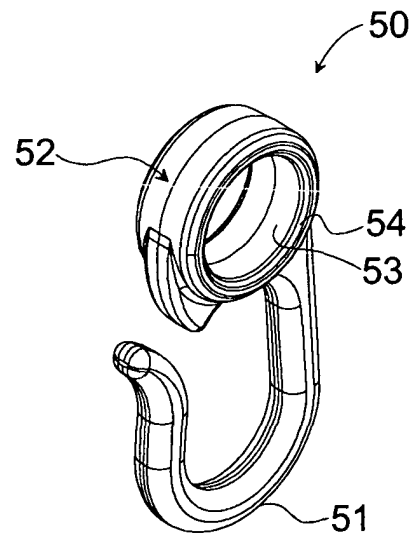


Fig. 3c

Fig. 4a

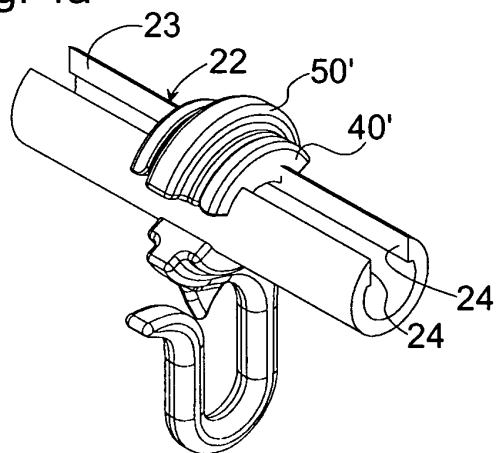


Fig. 4b

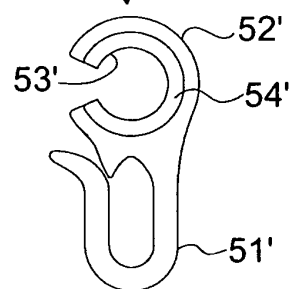


Fig. 4c

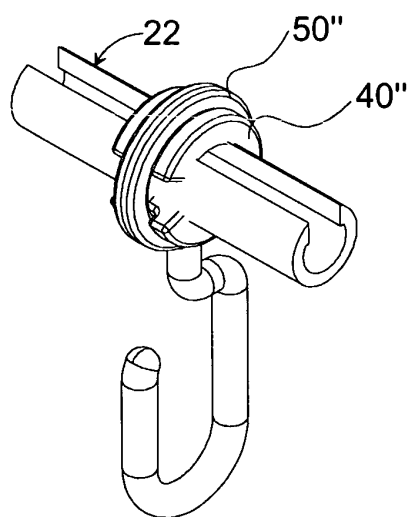
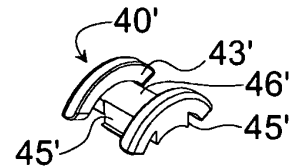


Fig. 5a

Fig. 5b

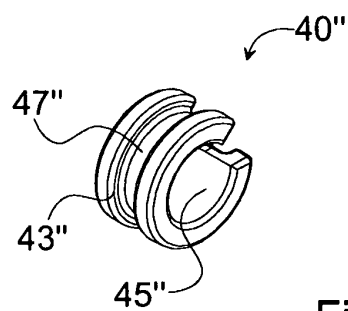
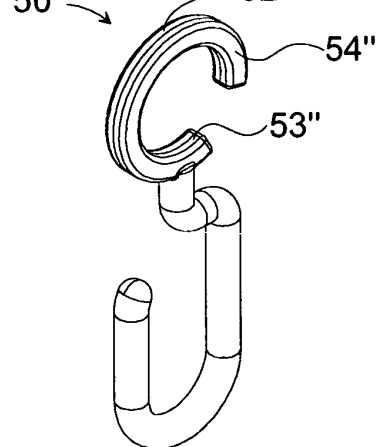


Fig. 5c

Fig. 6a

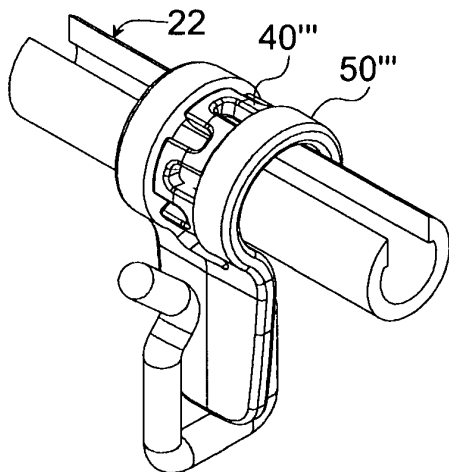


Fig. 6b

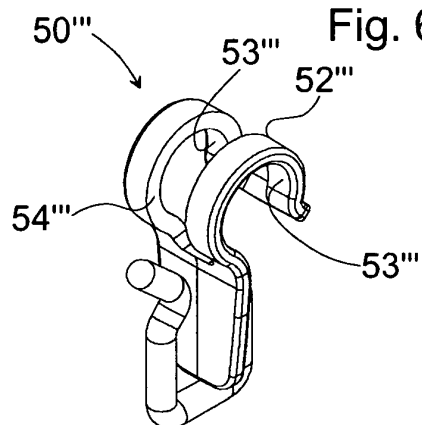


Fig. 6c

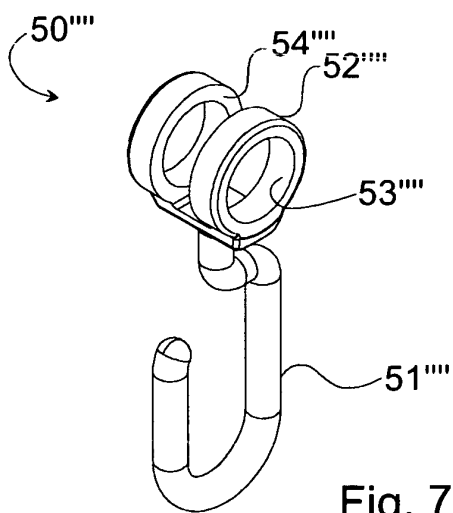
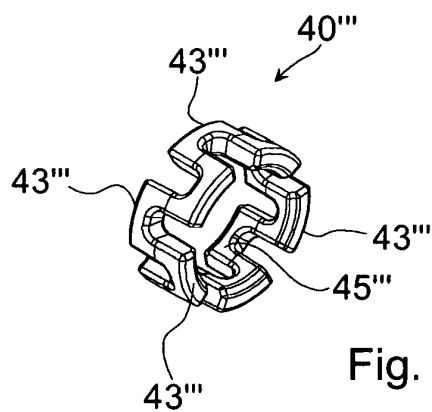


Fig. 7

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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